

Join: Facilitating a culture of intergenerational interaction at Champion Intergenerational Center

Research Thesis

Presented in partial fulfillment of the requirements for graduation with distinction in Industrial Design in the undergraduate colleges of The Ohio State University.

by

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## HELLO!

My name is Lauren Hoffman, and I am a designer originally from Midland, Michigan. My focus within Industrial Design has primarily surrounded the design of children's toys and products for infants, and I have a great passion for sustainable and equitable design.

The result of my senior thesis is a program called Join, developed with and for Champion Intergenerational Center, a local combined preschool and senior day care center. This project was financially supported through the Arts Undergraduate Research Scholarship at The Ohio State University. A big thank you goes out to my friends, family, teachers, and all the folks at Champion for their continued support throughout this process.

To learn more, flip the page!

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## CHAMPION INTERGENERATIONAL CENTER

Champion Intergenerational Center is located in the King-Lincoln neighborhood of Columbus, Ohio. It is a combined senior day care and early learning center.

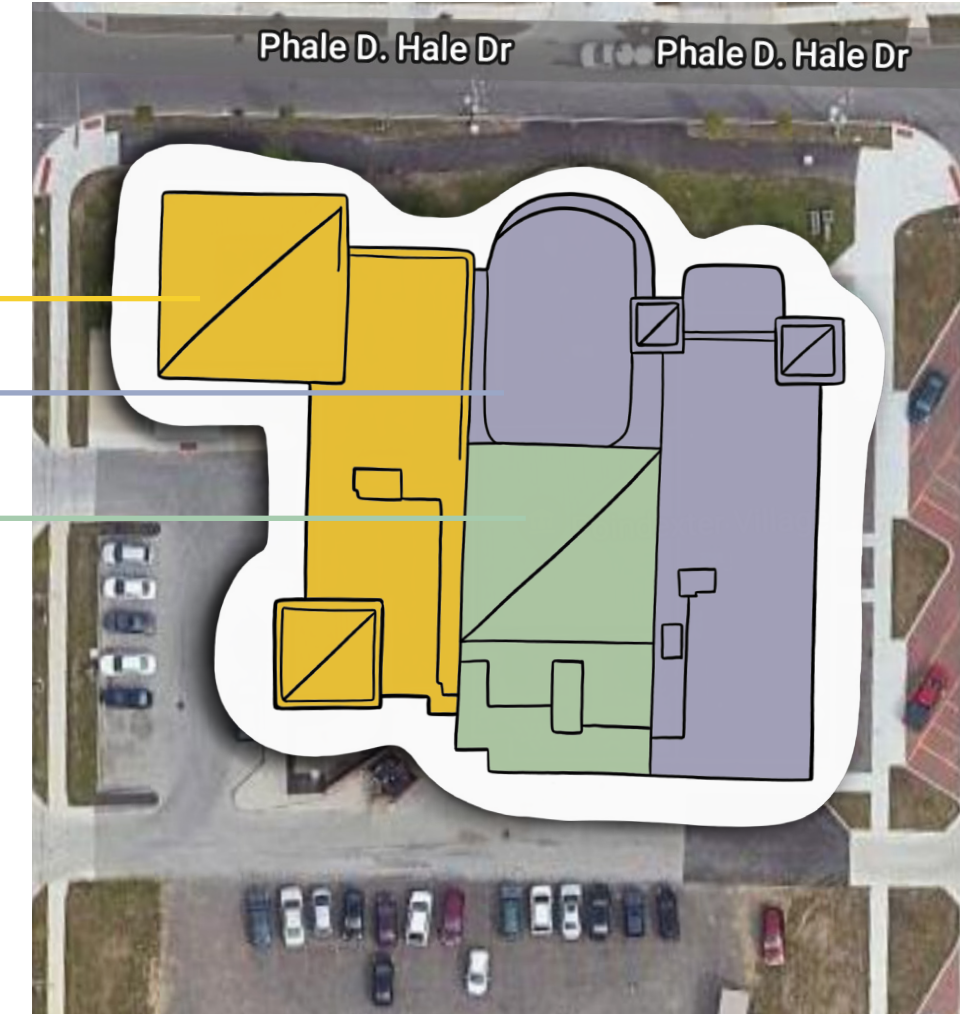
### PARTNERS



Adult Day Care

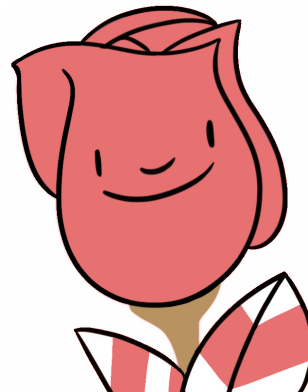
Early Learning Center

Cafeteria/Kitchen

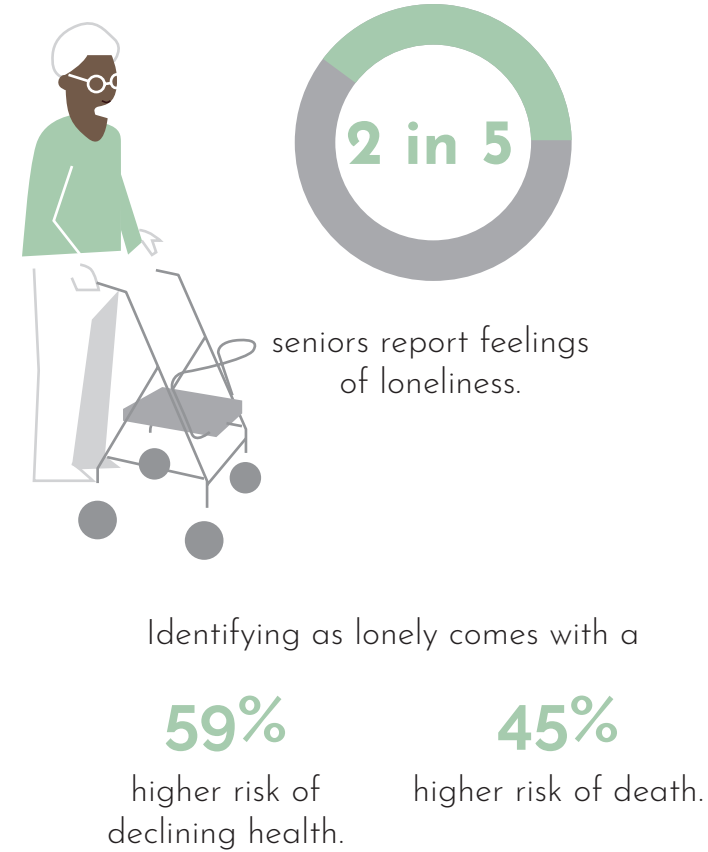


## PRIMARY AND SECONDARY RESEARCH

A literature review was conducted on existing intergenerational programs, and experts were consulted and interviewed. Primary research was conducted at Champion, employing design research methods of observation, interviewing, codesign, and insight analysis.



## OLDER ADULTS



Freedman, V. A., & Spillman, B. C. (2014). Disability and care needs among older Americans. *The Milbank Quarterly*, 92, 509-541. <https://doi-org.proxy.lib.ohio-state.edu/10.1111/1468-0009.12076>.

## PRESCHOOLERS



McGuire A. (2019). Toddlers and seniors together: The benefits of intergenerational care. *Institute for Family Studies*. <https://ifstudies.org/blog/toddlers-and-seniors-together-the-benefits-of-intergenerational-care>



## WHAT IS INTERGENERATIONAL INTERACTION?

Secondary research summaries.

### ARTICLES



*Intergenerational Dance in Long-Term Dementia Care*



*Sky Villages*



*LittleInventors*



### FINDINGS

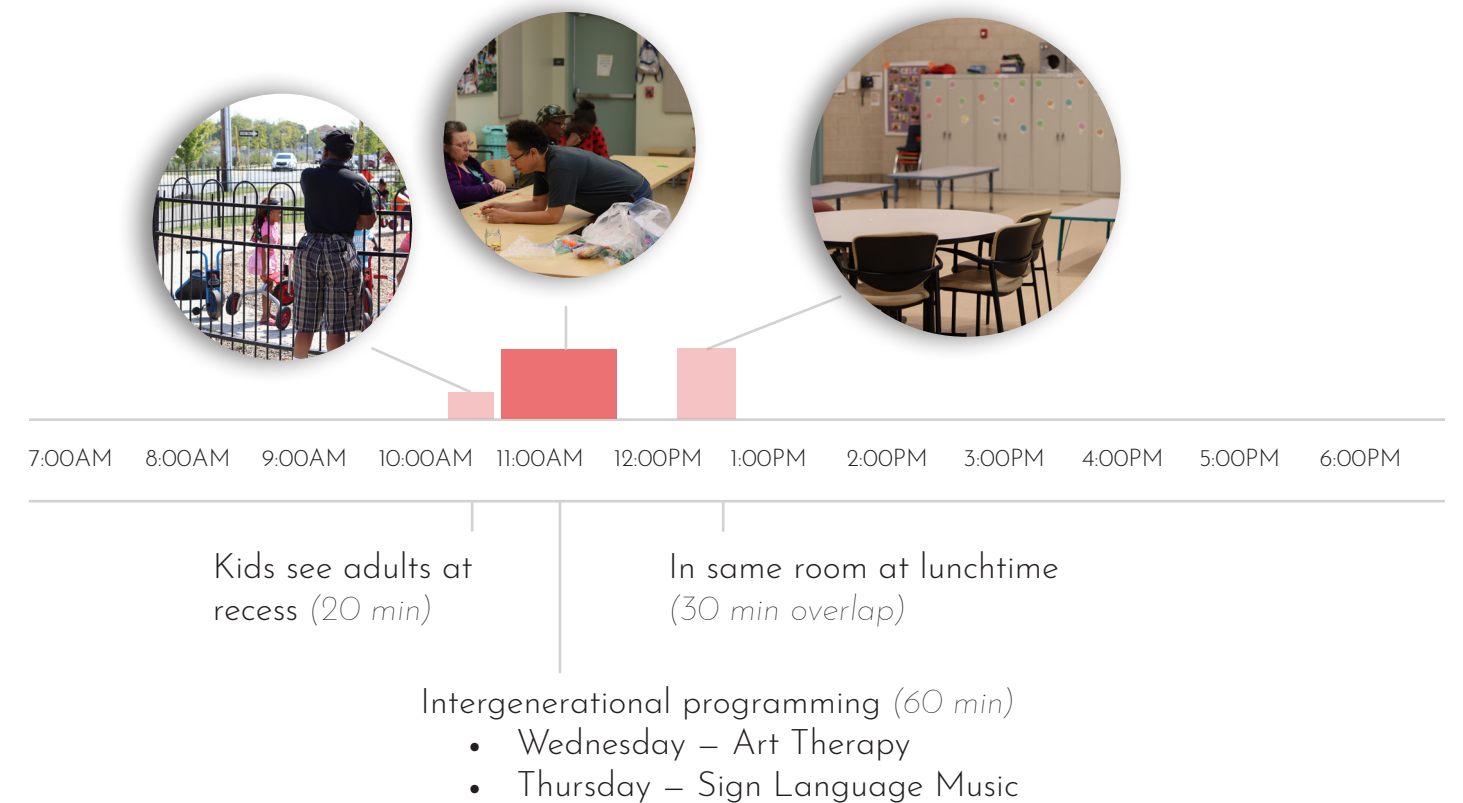
Most intergenerational programs at shared sites are facilitated activities.

Spontaneous interactions can be prompted through art or installations.

Children have a lot to offer older adults, and older adults have a lot to offer children.

## DAILY INTERGENERATIONAL INTERACTION TIMELINE

Analysis of daily interaction between the preschoolers and older adults at Champion Intergenerational Center.



SEMI-FORMAL/INFORMAL INTERVIEWS

Older adults and preschoolers expressed their varying opinions about each other.  
*11 older adults were interviewed semi-formally. 2 preschool classes were interviewed informally at lunchtimes.*



"I love seeing those kids. It reminds me of my [family]."



"I have grandkids at home so I wouldn't want to spend time with them ."



"I wish we sat with the kids at lunch."



"They're scary."



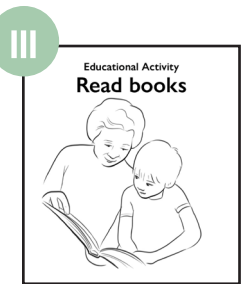
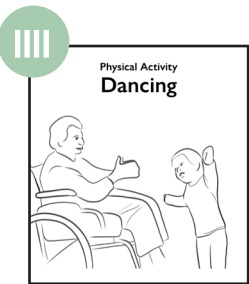
"They're my friends!"



"I like singing with [the older adults]."

OLDER ADULT ACTIVITY PREFERENCES | CARD SORT

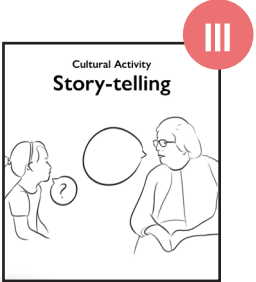
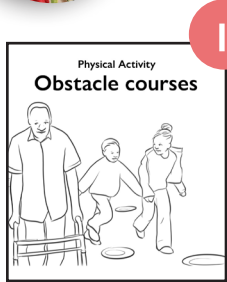
7 participants listed their favorite and least favorite activities.  
*9 activities were placed on cards. Three cards were dedicated toward the themes of cultural, physical, and educational activities.*



"If the music is right, it doesn't matter if I'm dancing by myself."



"You've got to have a nice long greeting."

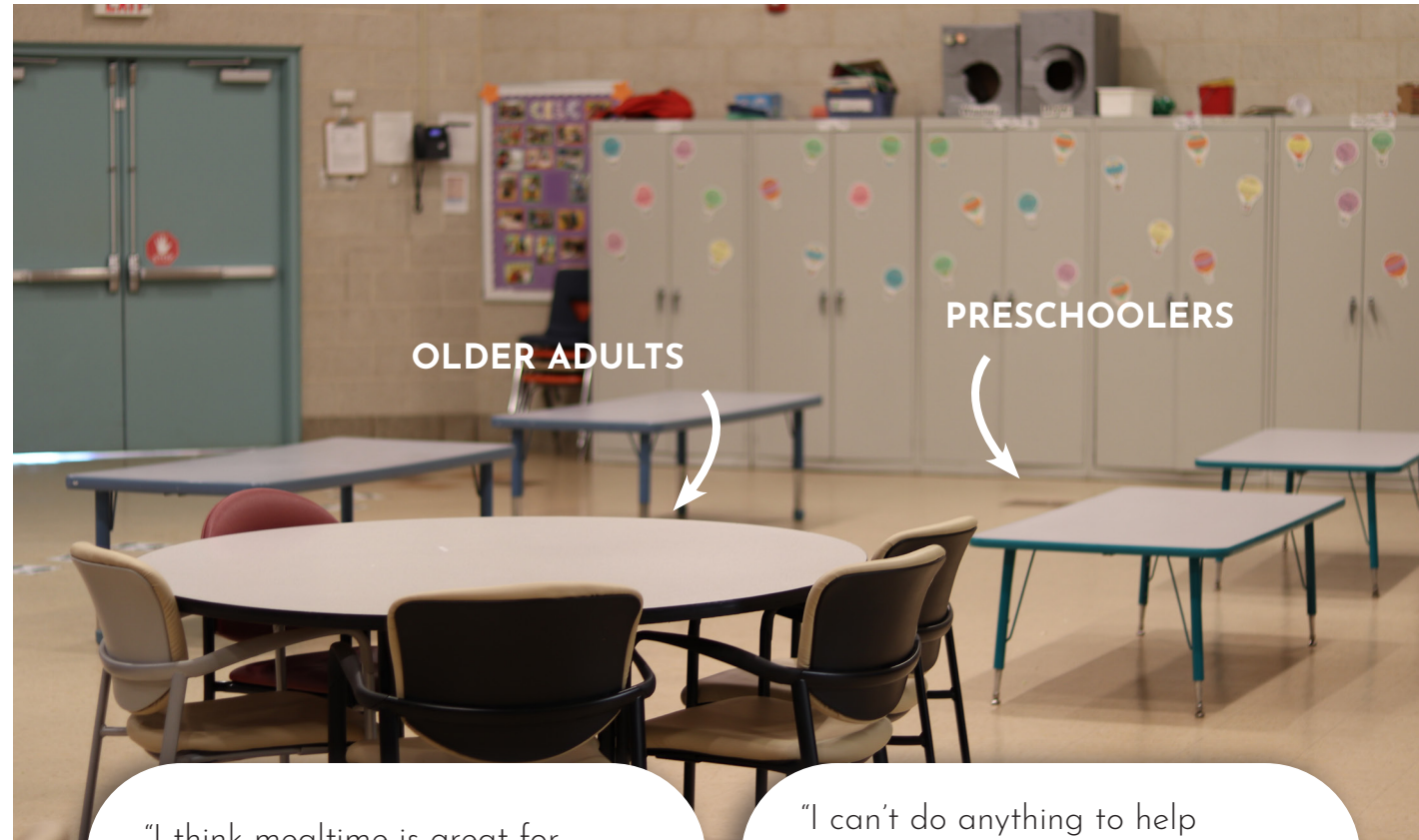


"Not everybody tells a good story."



## ANALYSIS OF LUNCHROOM | INTERVIEWS

Teachers and staff expressed their desire for an intergenerational lunchtime program but felt that they didn't have the time or agency to develop it.



"I think mealtime is great for authentic and organic interactions."

"I can't do anything to help with that [organizing lunchtime program]. I have enough going on."

## ANALYSIS OF LUNCHROOM | INTERVIEWS

Teachers and staff expressed their disapproval of current post-lunchtime behavior. After lunch, preschoolers are allowed to get up from their seats to color and read. This creates an overly active lunchtime environment and doesn't prepare the preschoolers for nap time.

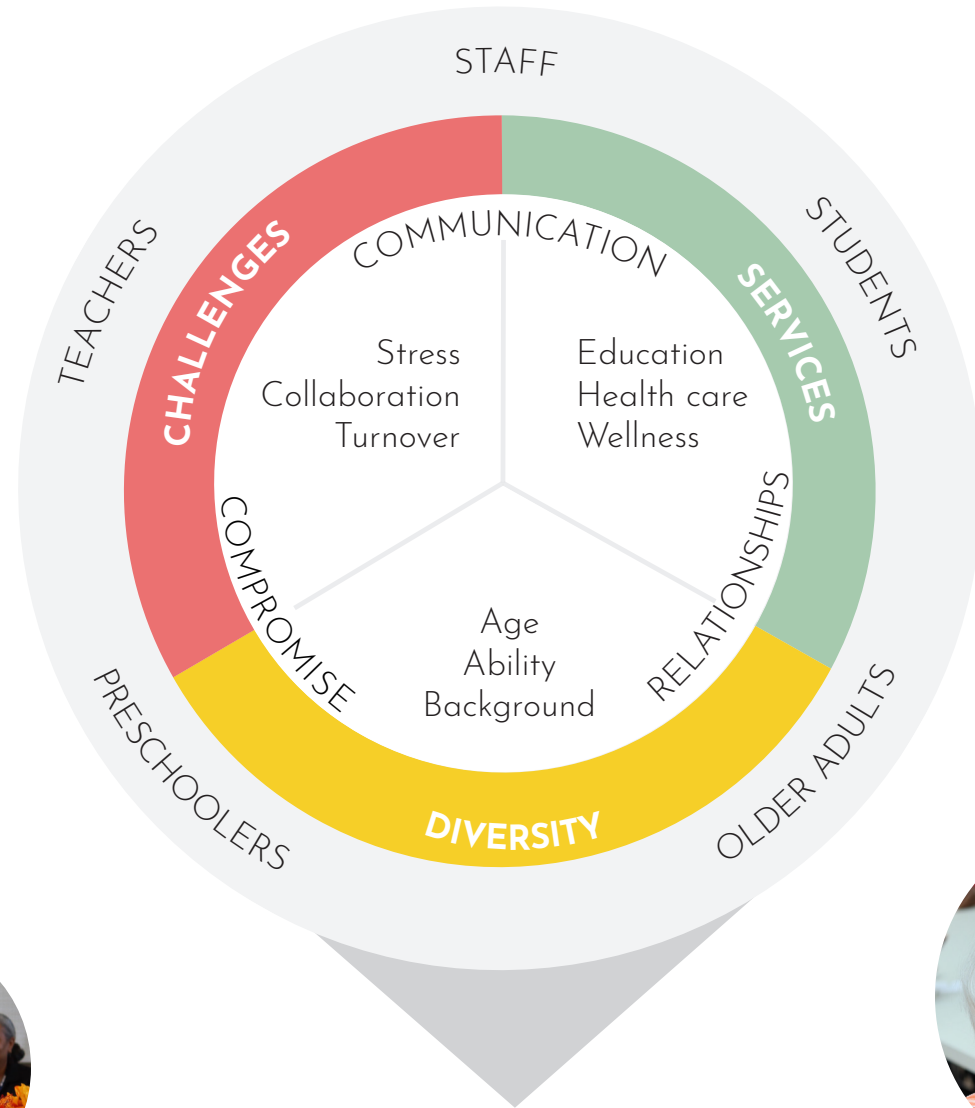


"They're always moving and don't know how to act."

"Why do they run around like that? It's not like that in kindergarten."

"They go wild at lunch. I don't agree with that."





**INTERGENERATIONAL  
INTERACTION MODEL**



## PRELIMINARY DESIGN CONJECTURES

Research was synthesized into four design conjectures that broached solutions using four worlds: focus, business, art, and science and technology.



There is a need to **increase the quantity and quality of intergenerational interaction** at Champion Intergenerational Center, a combined senior day-care and early learning center in Columbus, Ohio.

Preschoolers aged 3-5 and older adults, often with cognitive or mobility impairments, eat lunch in the same room at Champion but do not currently eat together or interact. **More can be made of mealtime interactions**, accounting for factors like the pressure placed on teachers and staff, diverse abilities, and the needs of developing children.



CURRENT



IDEAL



PLAUSIBLE



- Kids see adults at recess (20 min)
- Intergenerational lunch and activity (30 min overlap)
- Intergenerational programming (60 min)
  - Wednesday – Art Therapy
  - Thursday – Sign Language Music



Champion **does not fulfill its goal of intergenerational interaction.** Columbus Early Learning Centers, National Church Residences, and Ohio State University do not communicate effectively which affects the quality of intergenerational care that clients receive. Using a strategy of encouraging more neighborly connection between the older adults and preschoolers will reinforce intergenerational interaction as a priority for the three entities.

The preschooler's **post-lunchtime play is active** and doesn't prepare preschooler's for nap time. This currently upsets the staff and older adults. As a result, process and environments must reflect calming atmospheres. Touchpoints may include mindfulness activities or the incorporation of natural elements.

There is a **high turnover rate** with the teachers. The staff and teachers are stressed and overworked, and don't want additional burdens placed on them. Approaching this issue will require strategies that are intuitive and don't place additional burdens on teachers or that support teachers and staff and make them feel gratified.

Some seniors want to interact with the preschoolers, while **others do not.** Honoring this choice must be considered by encouraging varying levels of interaction in the lunchroom.

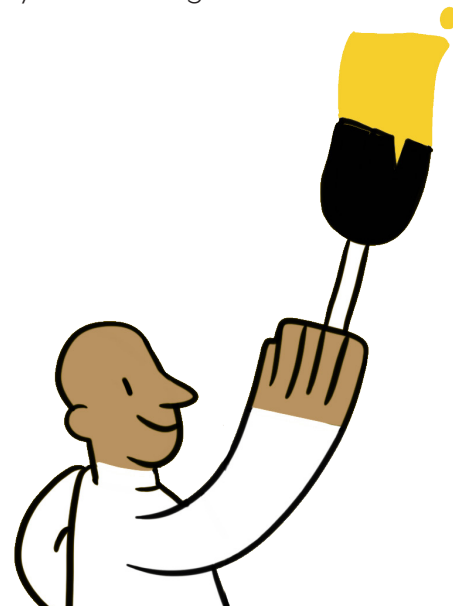
Intergenerational interaction needs to **promote childhood development.** Preschoolers need to be taught how to engage with others at lunchtime. This strategy supports key development in the area of social-emotional development and self-control.



## DESIGNING WITH CHAMPION CLIENTS

Older adults were prompted to “create something that would make the cafeteria more enjoyable.” They were provided with a toolkit of blocks, dolls, paper, and pens and were given a few minutes to describe their creation. This data became useful for developing concepts that were relevant and meaningful to the clients at Champion.

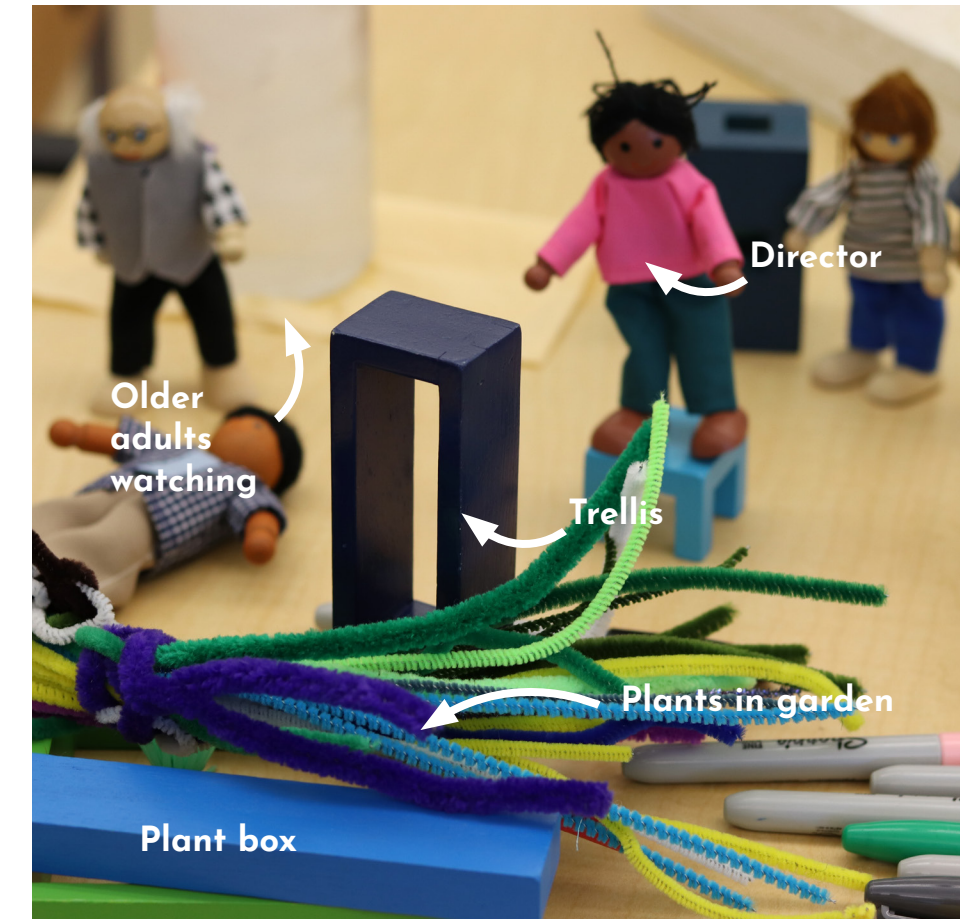
Preschoolers were given three styles of coloring pages: blank, half drawn, and example-based. Conducting this activity led to insights on how to best prompt creative making.



### CODESIGN SESSION 1 “The Garden Cafeteria”

- Games while eating would help make mealtime fun for the adults and kids
- A director oversees a garden in the cafeteria
- Gardening is a good learning activity for the kids
- Would stay in the cafeteria longer to make and look at her creation
- Liked the idea of putting a chia pet at each table

- ✓ Natural forms/objects
- ✓ Creative/building element
- ✓ Something for each table







## CODESIGN SESSION 2

"Tables for Chatting"

- Need a table and chairs so people can converse
- Doesn't eat at lunchtime
- Sits in the cafeteria and talks with the other older adults
- Put decorations on the table
- People would talk about the plant and trophy on the table
- Doesn't want to sit with the preschoolers

- ✓ Tabletop items prompt conversations
- ✓ People should be able to see each other

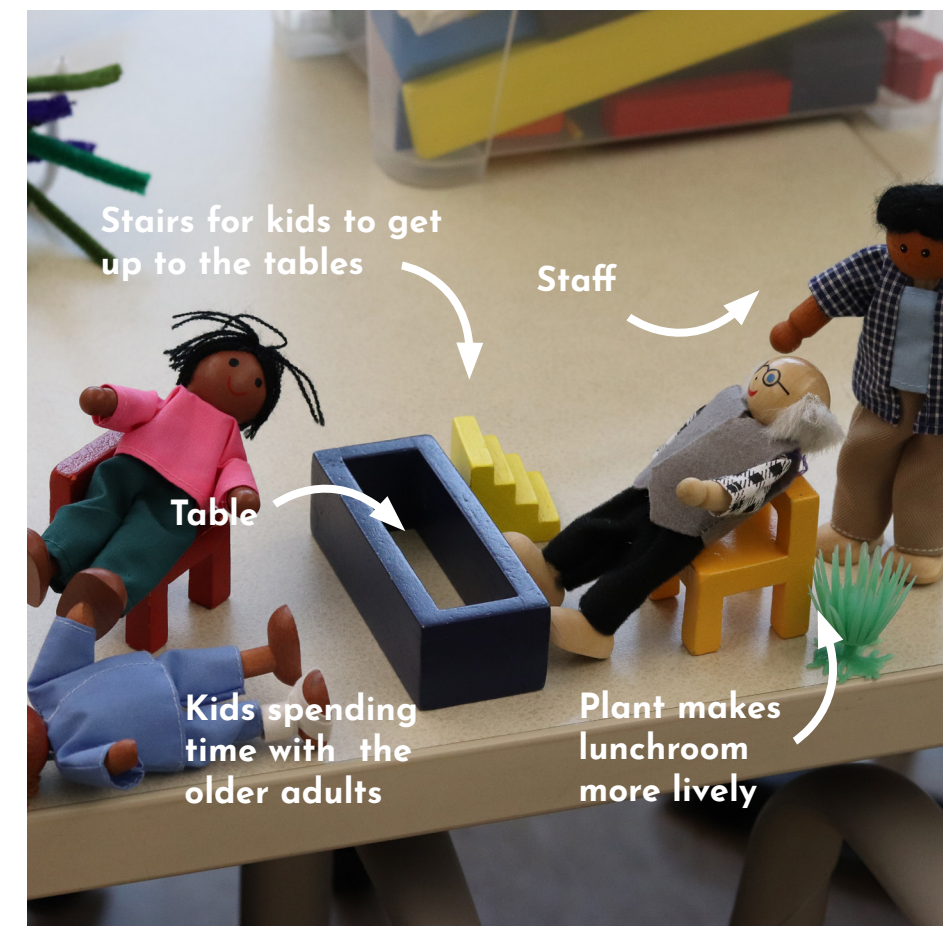


## CODESIGN SESSION 3

"Table Etiquette"

- The kids sit at the same table as the older adults
- The kids could help serve the adults
- A program where the kids learn their manners
- Lunch is quiet
- Food items are displayed around the cafeteria
- Display what to eat for breakfast and snacks
- Show how to eat healthy

- ✓ Promote good lunchtime behavior
- ✓ Keep spaces calm
- ✓ Educate about nature and food







## CODESIGN SESSION 4

"Learning and Lounging"

- One kid learns their ABC's
- Preschooler is taught by the older adult
- An older adult is watching television
- The kid is free to walk around and the adult sits in a chair

- ✓ Kids and adults can do separate activities if they want to
- ✓ Adults can play a role in teaching the kids



## CODESIGN SESSION 5

"A Colorful Cafeteria"

- Grey metal dividers in the cafeteria could be more colorful
- Thinks large pipe cleaners on the ceiling would add color and be interesting
- Kids could weave their own patterns into the metal dividers

- ✓ Kids and adults build something together
- ✓ Add color to the lunchroom





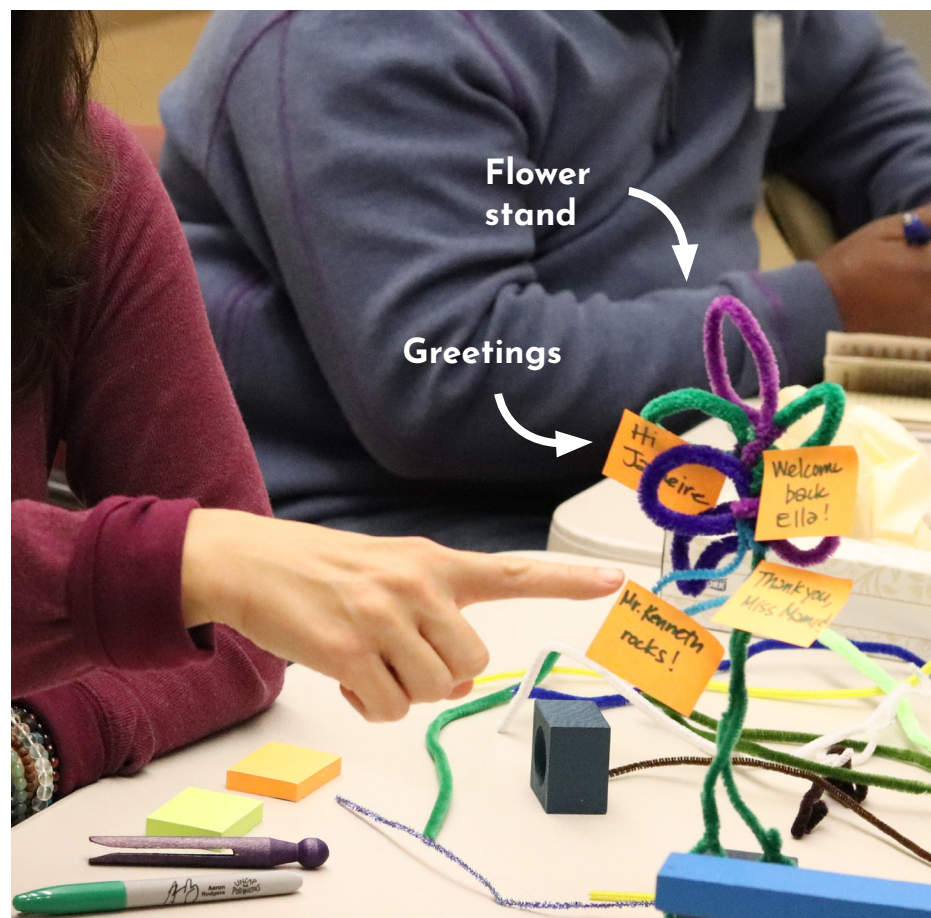


## CODESIGN SESSION 6

"Message Flower"

- Flower shaped stand used as a message board
- Everyone got a message on the flower
- There could be one big flower or a bunch of small flowers
- One flower could be at each table in the cafeteria

- ✓ Promote lunchtime conversation
- ✓ People express themselves

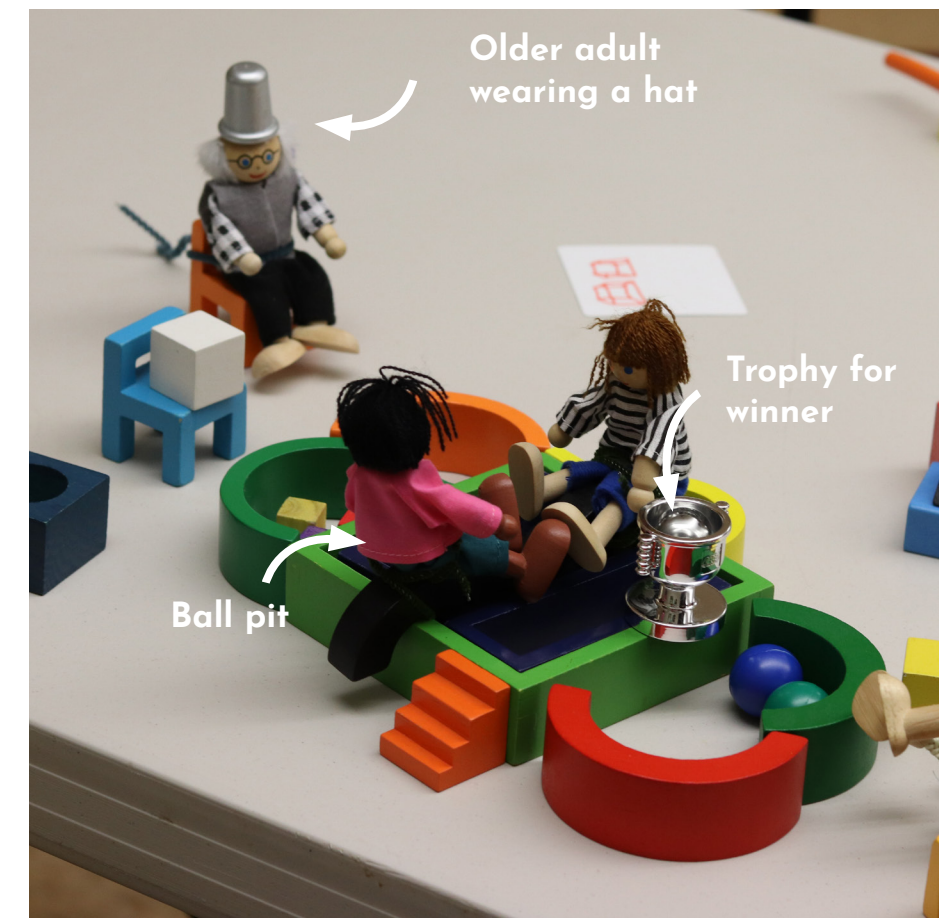


## CODESIGN SESSION 7

"See Saw Competition"

- There is a see saw on a large platform
- There are two ball pits on either side of the platform
- The winner gets a trophy
- The older adults watch the kids but don't participate
- The adults wear fun hats

- ✓ Feel accomplishment for completing activity
- ✓ Interesting activities to watch and participate in



CODESIGN ANALYSIS

Features and traits categorized into three touchpoints criterion for changes to the cafeteria.

CALM ACTIVITY	TABLETOP PROMPTS	CREATIVE BUILDING
<div>✔ Promote good lunchtime behavior</div> <div>✔ Keep spaces calm</div> <div>✔ Natural forms/objects</div> <div>✔ Interesting activities to watch and participate in</div> <div>✔ Kids and adults can do separate activities if they want to</div>	<div>✔ Tabletop items prompt conversations</div> <div>✔ Adults can play a role in teaching the kids</div> <div>✔ Promote lunchtime conversation</div> <div>✔ Something for each table</div> <div>✔ People should be able to see each other</div> <div>✔ Educate about nature and food</div>	<div>✔ Kids and adults build something together</div> <div>✔ Creative/building element</div> <div>✔ Feel accomplishment for completing activity</div> <div>✔ People express themselves</div> <div>✔ Add color to the lunchroom</div>

✔ Aesthetic

✔ Action

✔ Attribute

CODESIGN DRAWING SESSIONS WITH PRESCHOOLERS

8 preschoolers completed three different drawing exercises.



Blank page

Partially-drawn page

Partially-drawn page with example of completed image

*This format facilitated the most critical thinking.*



## EVALUATIVE RESEARCH RESULTS

Valuable lessons were learned about designing activities for older adults and kids by conducting the codesign activities themselves.



Discoveries: Drawings were sometimes illegible, and crayons became a trip hazard.



Discoveries: Older adults struggled to build using abstract forms.

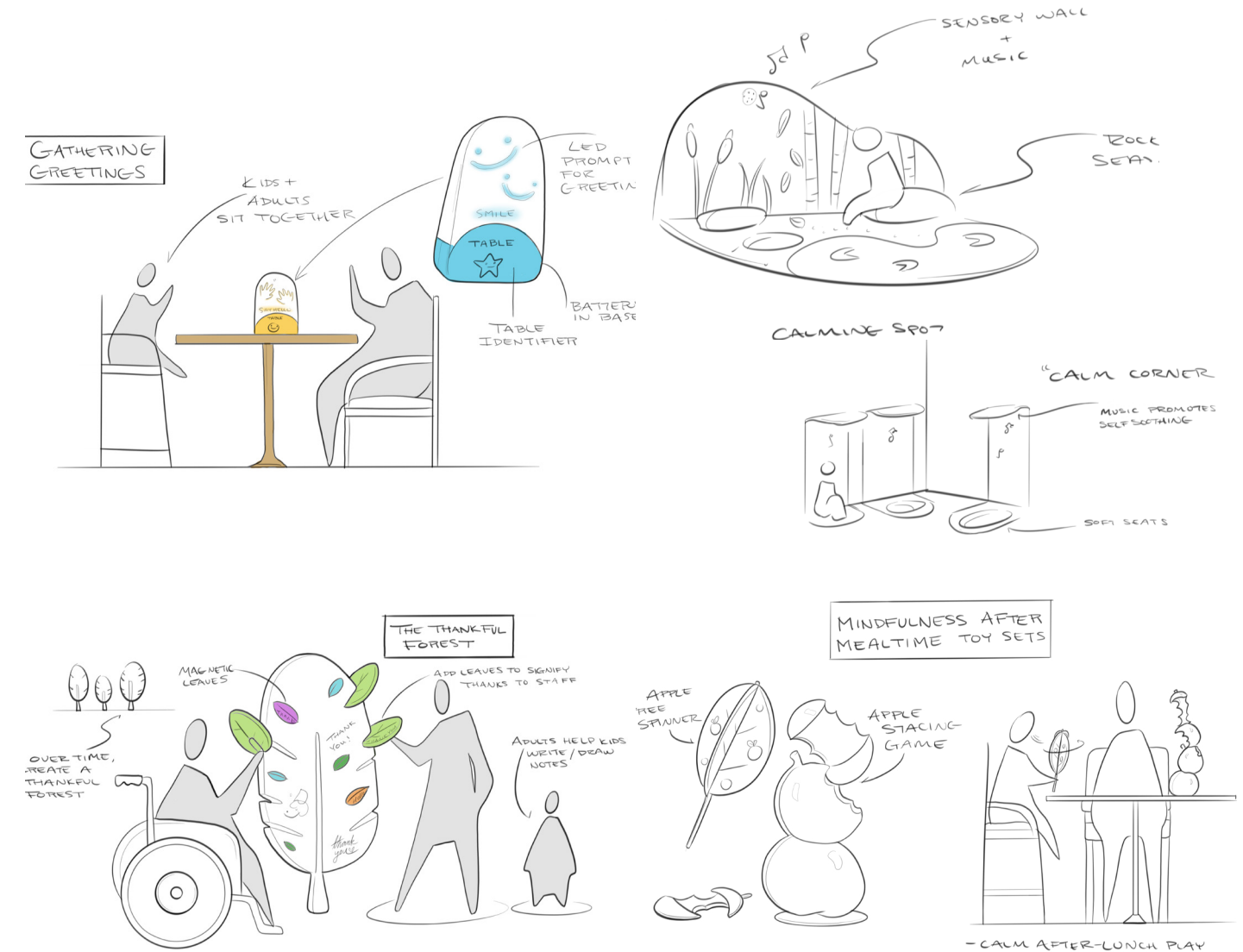


## MOVING FORWARD

I decided to steer away from drawing activities and abstract forms that would be confusing to older adults. I steered toward a design that prompted **creative building and conversation**.

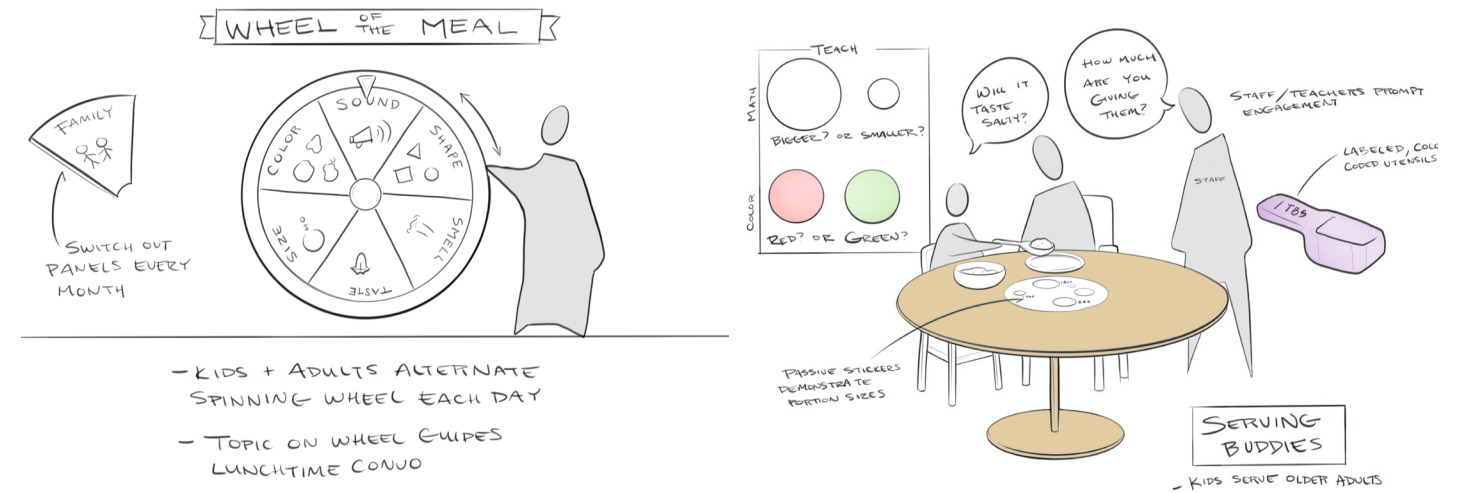
## ANALYSIS THROUGH SKETCHING

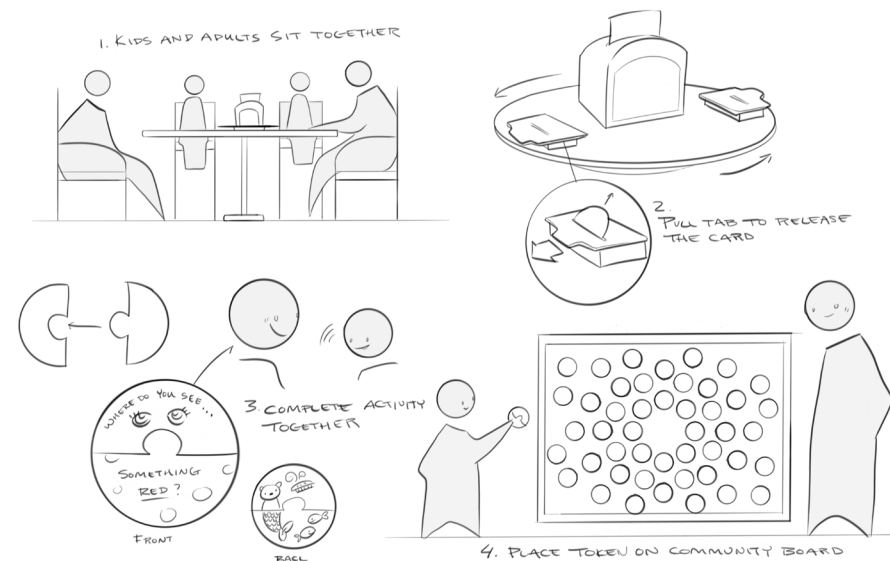
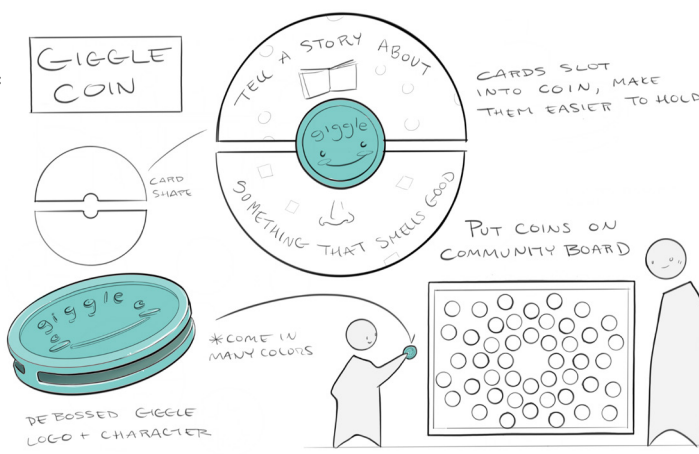
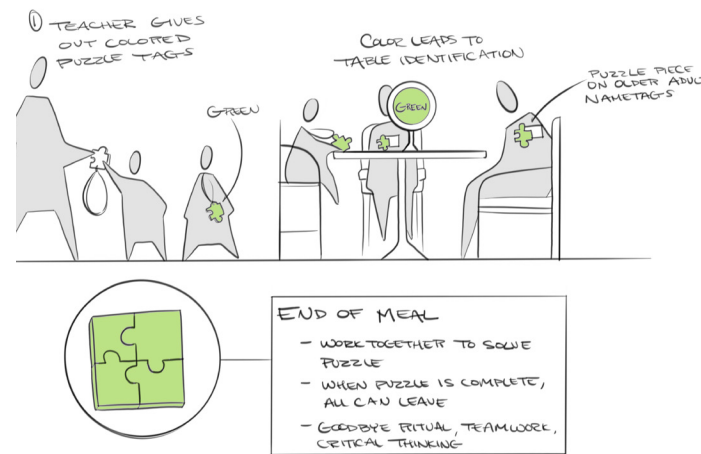
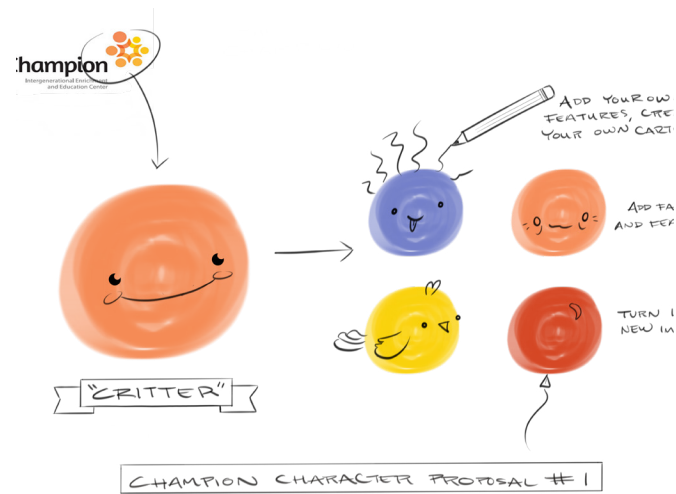
Using sketching as a tool for analysis, concepts inspired by the codesign activities were drawn.



## DEVELOPING CONCEPTS

Expanding off of the codesign explorations, additional ideas were developed and presented to stakeholders at Champion. Top concepts were selected to develop further. After several rounds of development, selection, and refinement, Champion selected the final design direction.







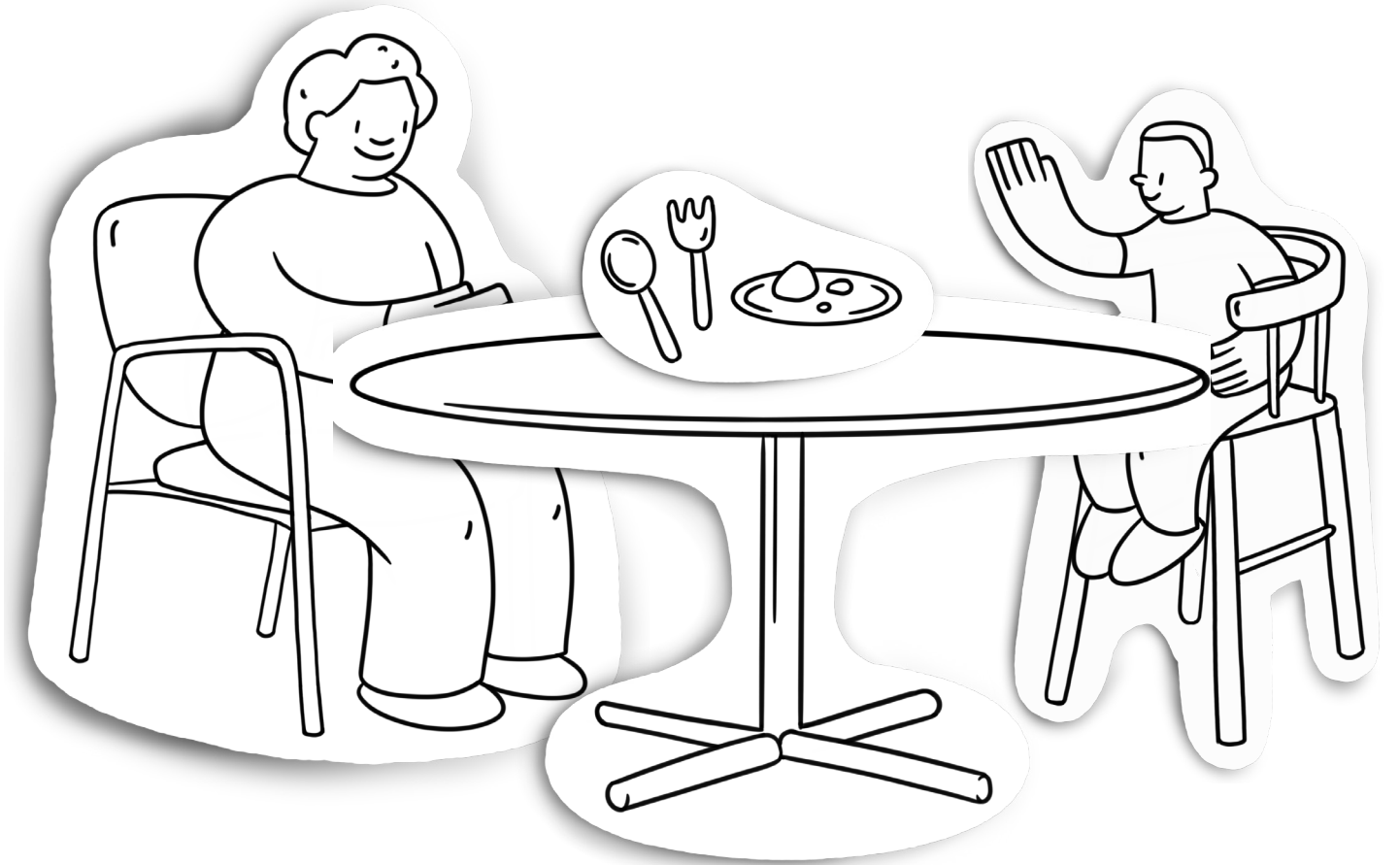
### NARROWING IT DOWN

Play-testing and concept reviews with key stakeholders at Champion helped propel concept refinement. Key aspects and play patterns of the product were tested at Champion using paper and foam core mockups.



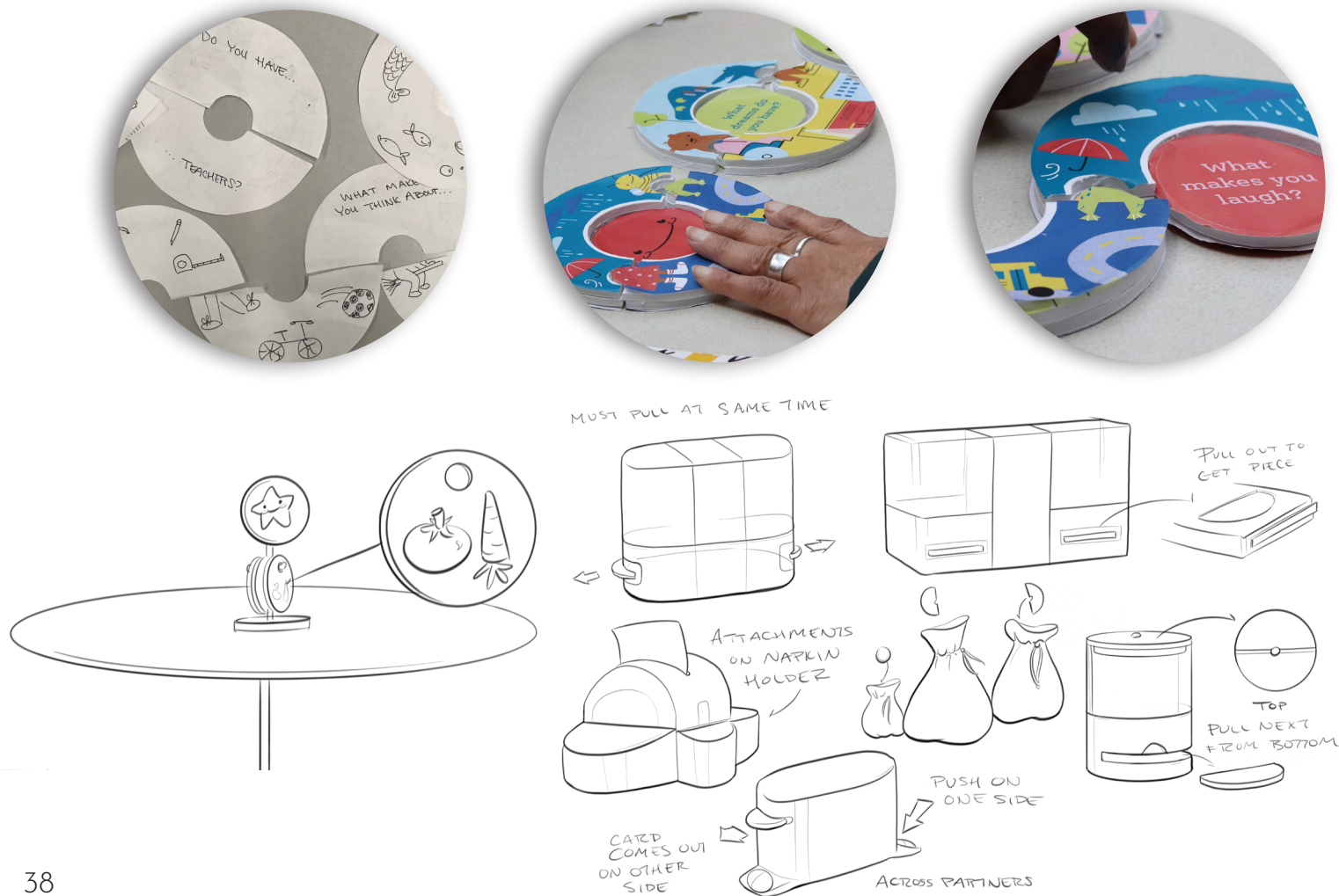
### INTERGENERATIONAL LUNCHTIME

We decided to plan a way for the preschoolers and older adults to sit together at lunch as well as an activity for them to do after lunch.



## CARD AND STORYTELLING GAMES

Quick prototypes were tested with the older adults to see what features prompted the most engagement. Co-currently drawn sketches further developed the design.



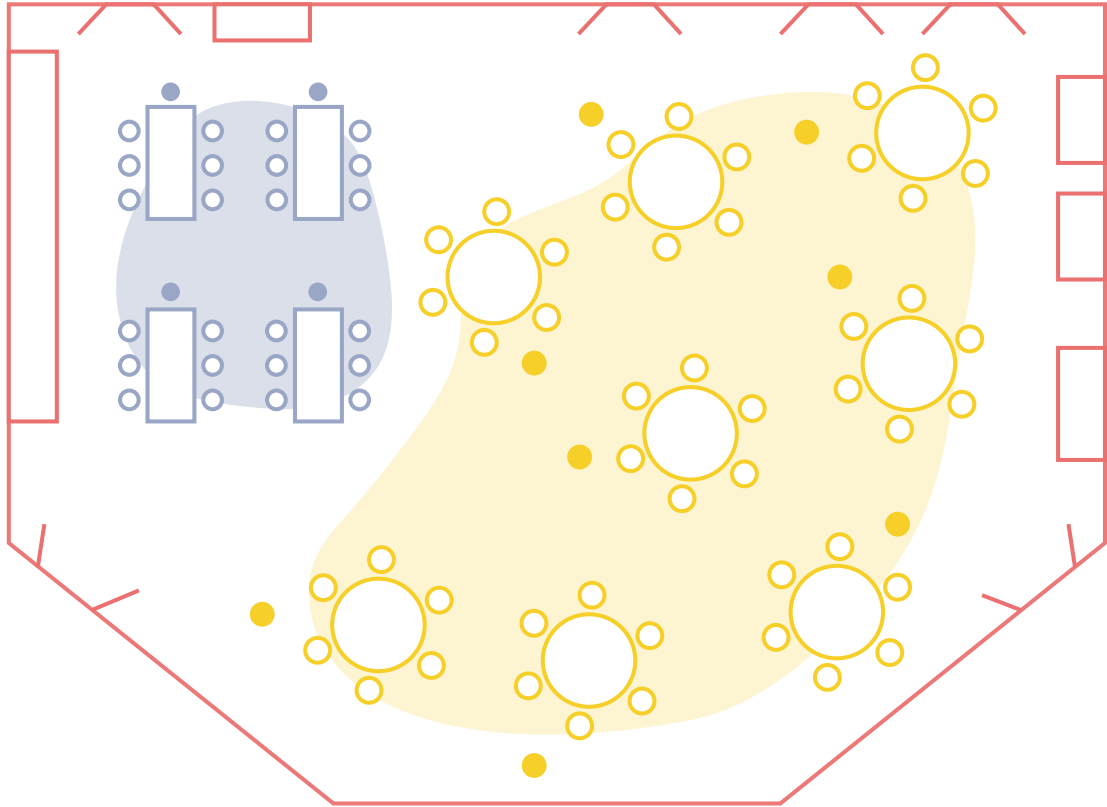
## PLAY TESTING RESULTS

Playing the game with the kids and older adults informed changes to the design.

Participants didn't know what the cards said	_____	Focus on illustration as communication.
Participants preferred sides of the blocks with illustrations.	_____	Both sides of the blocks have illustrations
Participants had confusion of how to put the pieces together	_____	Include notches like puzzle pieces to indicate top and bottom pieces.
Participants made completed circles, but didn't build on.	_____	Alter form to encourage chain making and building.
Participants unsure of the goal of the game/toy	_____	Reinforce goals with text on packaging.
Participants competed over certain pieces.	_____	Include multiples of each set.

CURRENT LUNCH LAYOUT

The cafeteria is currently divided into preschool and older adult spaces.



Key

○

Preschoolers

●

Teachers

○

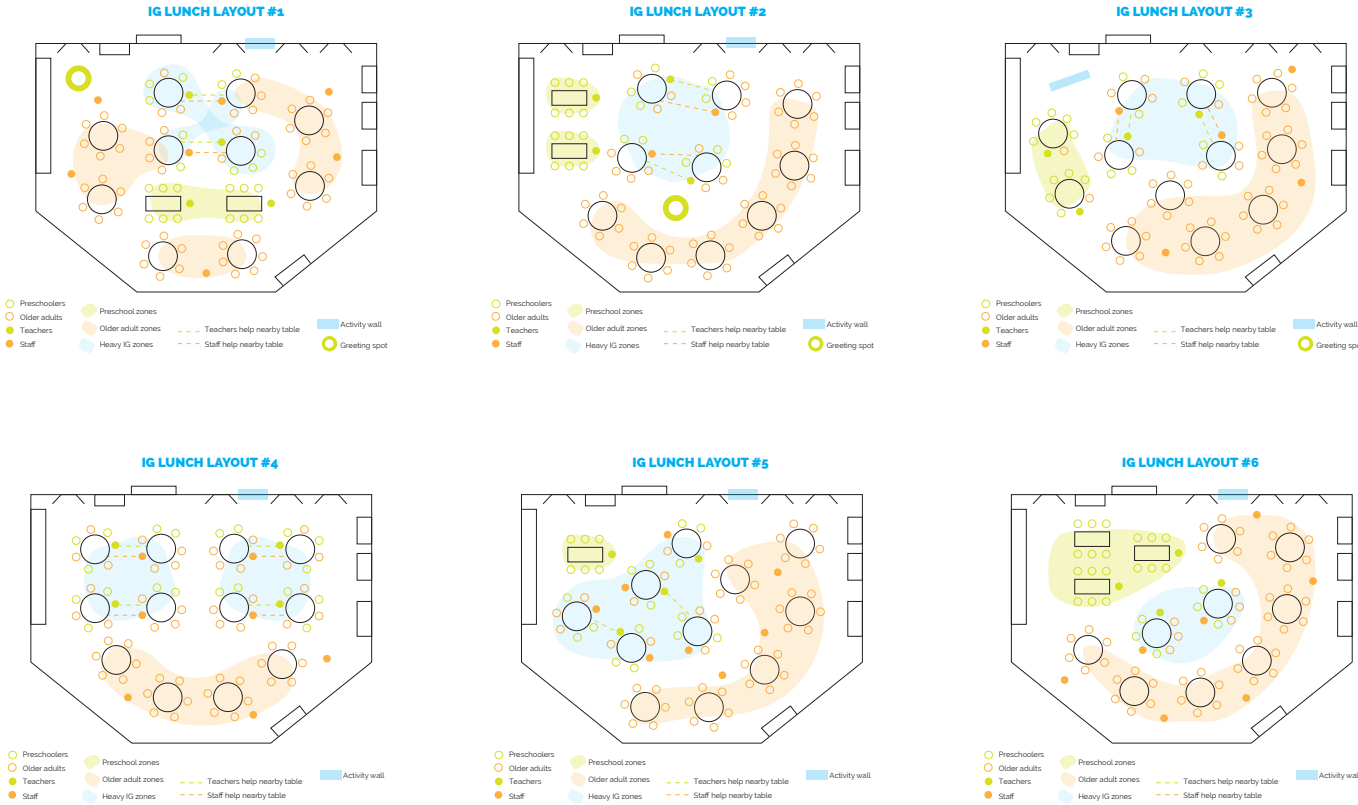
Older adults

●

Staff

NEW LUNCH LAYOUT IDEATION

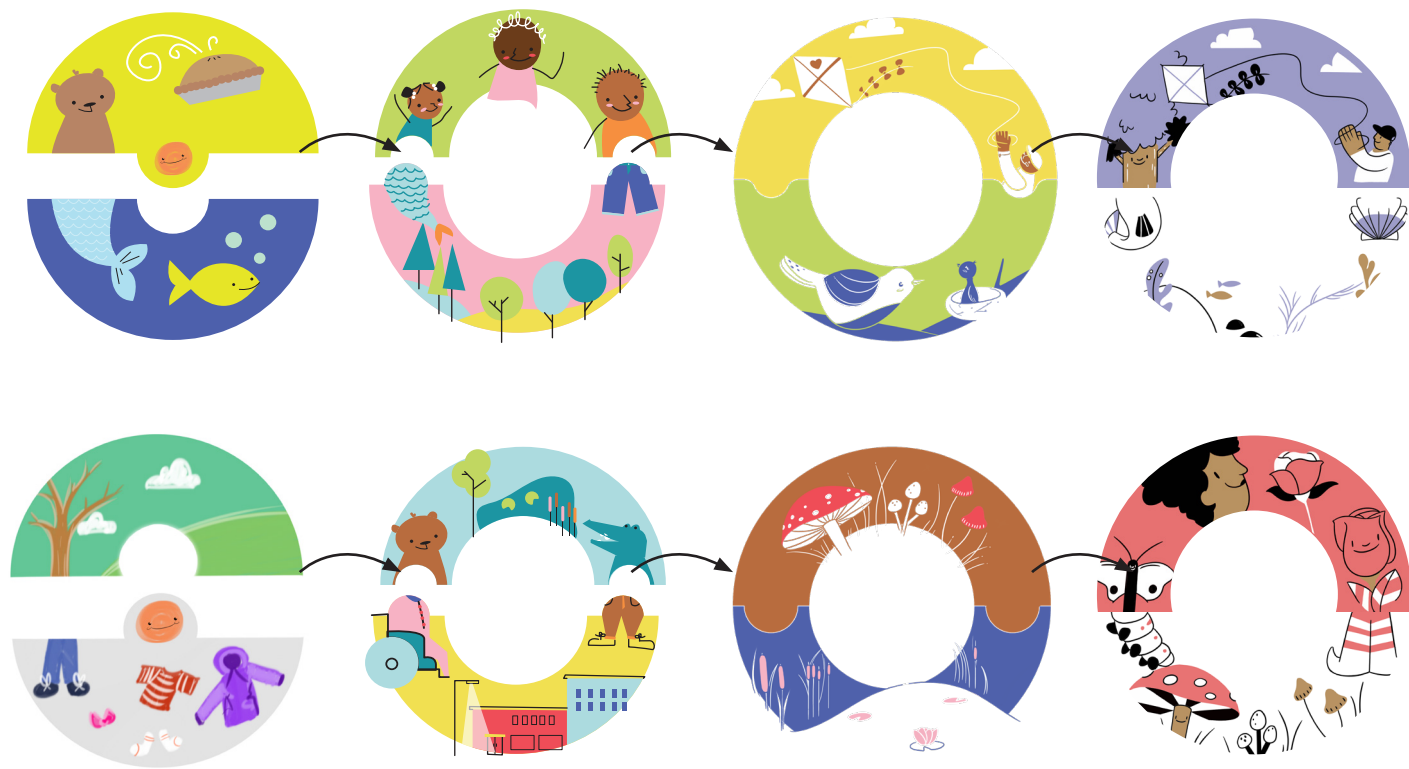
Layouts consider factors like: number of clients, partnerships between teachers and staff, ease of maneuvering cafeteria, and ease of clients remembering their seats.



## ILLUSTRATION DEVELOPMENT

Illustrations were refined to be inclusive and to reflect the daily life of Champion's clients.

*All bottom pieces are settings and all top pieces have actions.*



## THEME SELECTION

The themes of the blocks were narrowed down to three sets with the following themes.

*Themes were selected based on the content of conversations with clients at Champion.*



## LOGO DEVELOPMENT

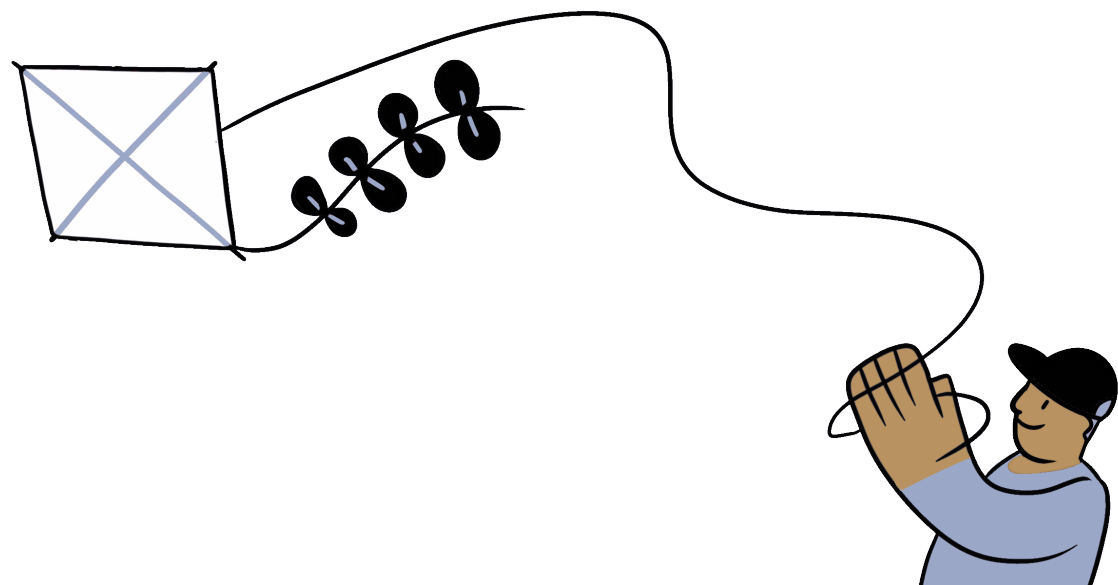
Legibility and playfulness were priorities in the development of Join's branding.





### THE FINAL DESIGN

After a combined lunchtime, Join blocks help to facilitate interaction between older adults and preschoolers at Champion Intergenerational Center. Join blocks are versatile tools that can be used in many different ways. The blocks have three different themes. As the chaos of lunchtime mixes the themes together, new combinations and communities can be explored.

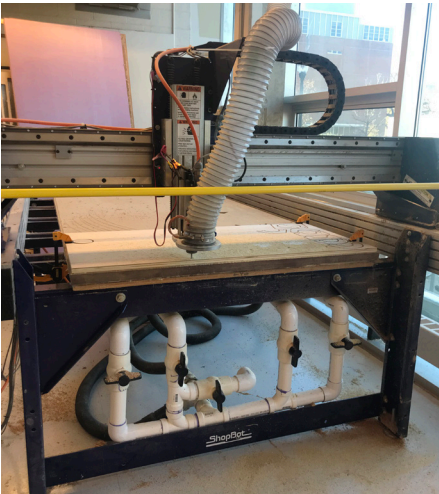


# join



**BLOCK PRODUCTION**

Blocks were cut out of the CNC machine and sanded. Graphics were applied by transferring a laser print of the illustrations onto the blocks using Polycrilic as a transfer medium.



CNC machine



Cut blocks



Transfer paper and example of transferred image

**IN EACH BAG**

Each bag contains 8 double-sided Join blocks. Bags have the printed Join logo on the front which serves as a call to action.

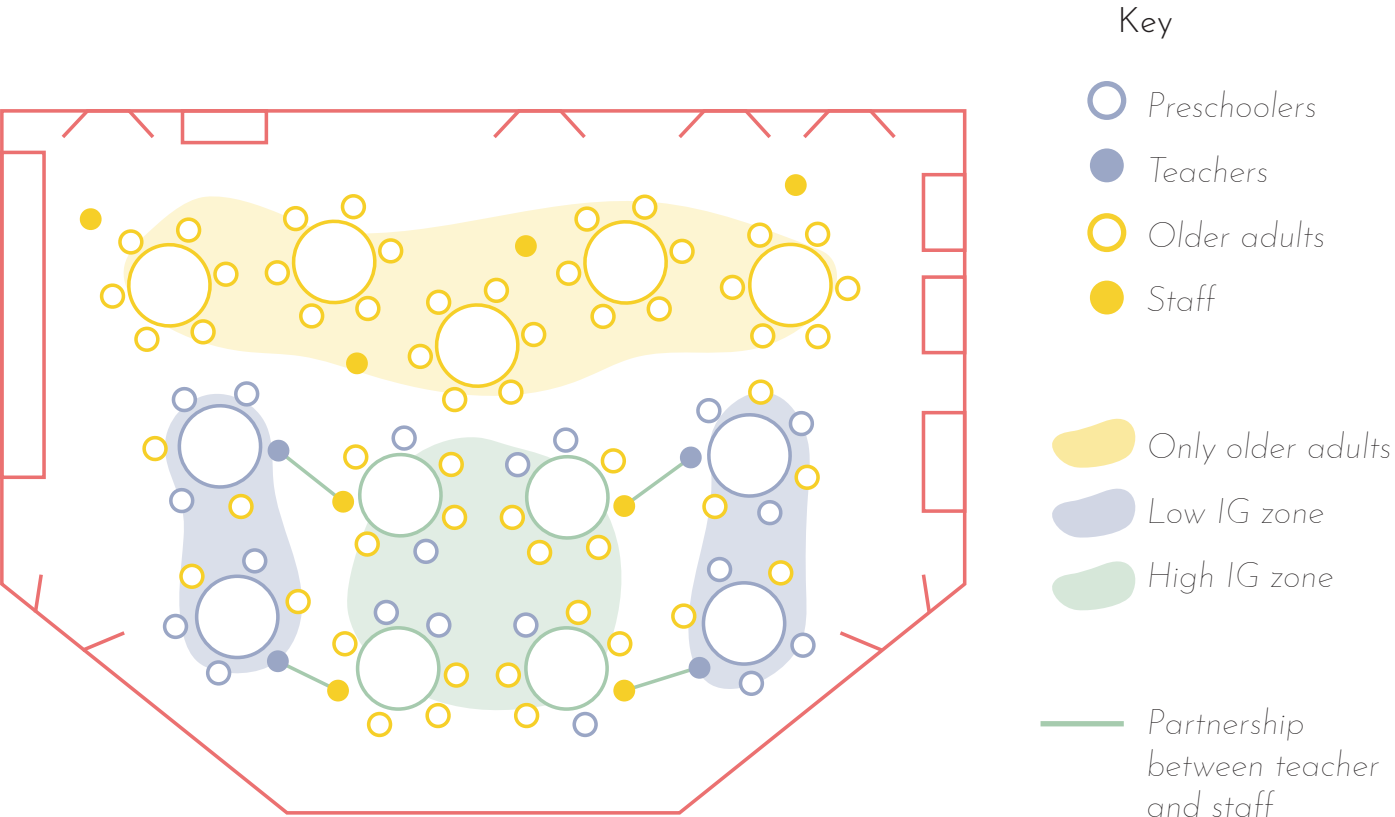
*9 bags (3 of each theme) were produced to give to Champion.*



NEW LUNCH LAYOUT

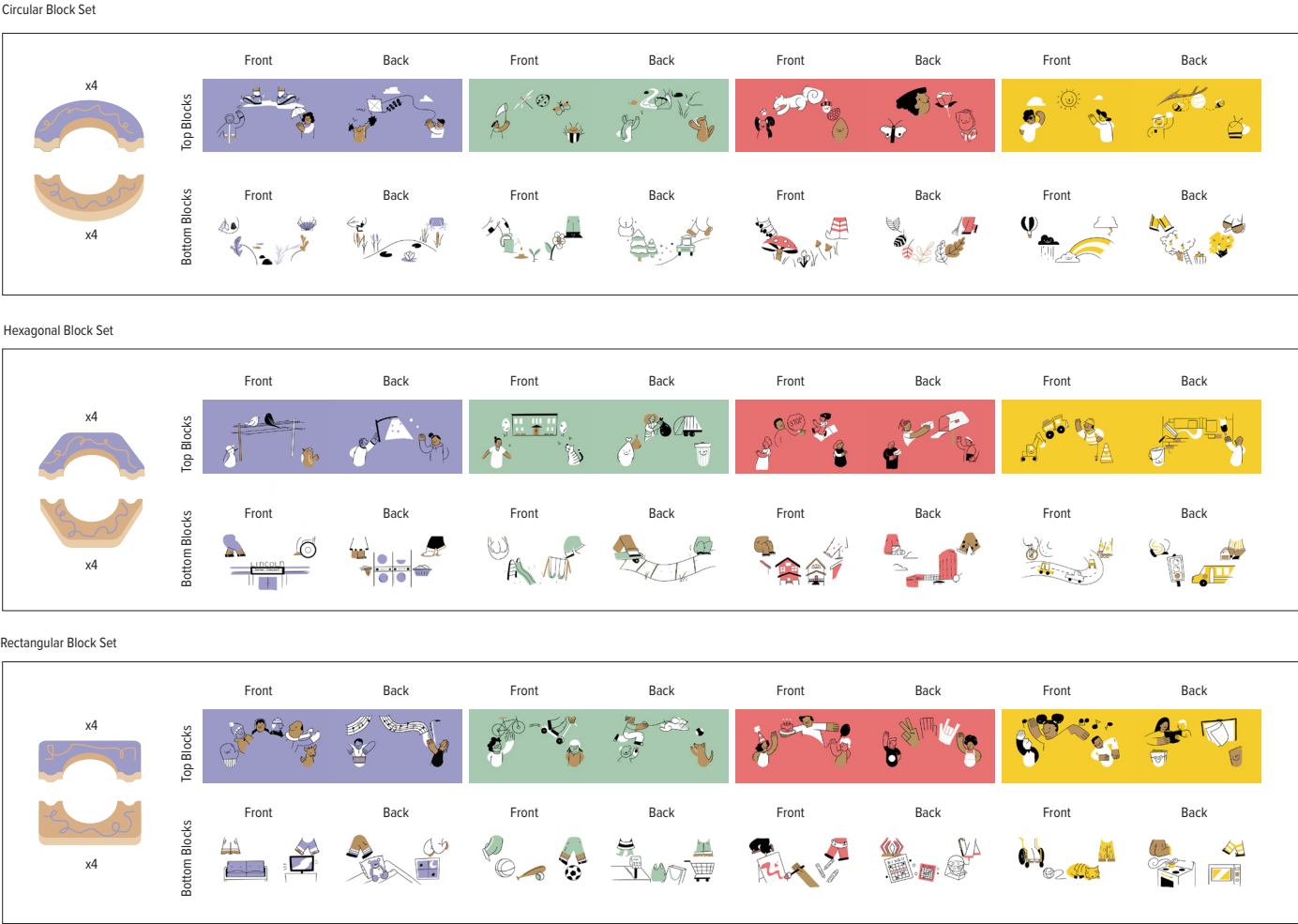
Layout accounts for 55 older adults, 20 preschoolers, 8 staff, and 4 teachers.

*This final layout was determined through meetings with staff, nurses, teachers, lunch monitors, and center directors.*



FINAL ILLUSTRATIONS

A typology of color and block type keeps design language consistent.





FORM AND PLAY PATTERNS

Block connection points indicate function and can easily slide together for individuals with limited hand dexterity.

Play testing revealed older adults' preference for the notched pieces.



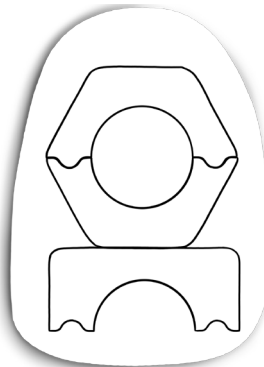
Shape sorting



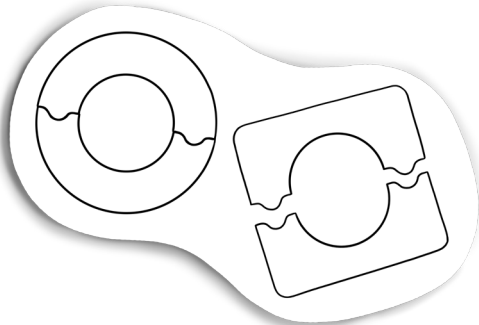
I-Spy



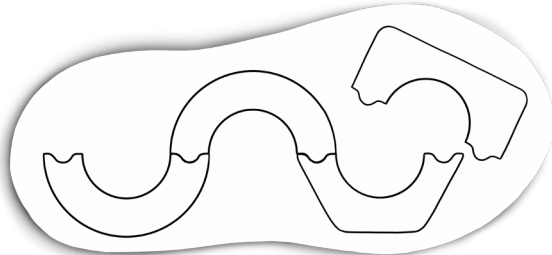
Memory recall



Building



Color matching



Storytelling

DEVELOPMENTAL BENEFITS

Join encourages the development of key behaviors and developmental milestones.

Professionals in child development supported design decisions.

**LINGUISTIC**

Identify images, use correct words and phrases, and tell stories.

**COGNITIVE**

Name colors and shapes, recollect stories, count, and engage in fantasy play.

**SOCIAL-EMOTIONAL**

Cooperate with others, take turns with games, copy adults and friends, show affection for friends.

CONSULTED PROFESSIONALS



Cynthia Buettner  
Assistant Professor, Department of Human Sciences



Sarah Lang  
Assistant Professor, Department of Human Sciences



Kelly Purtell  
Assistant Professor, Department of Human Sciences



Jim Bates  
Assistant Professor, Department of Human Sciences









join



**THANK YOU!**